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09/938,448	08/24/2001	Michel Deeba	4616	2234

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EXAMINER

TRAN, HIEN THI

ART UNIT	PAPER NUMBER
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1764

DATE MAILED: 06/25/2003

7

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/938,448

Applicant(s)

DIFFRA FT AI

Examiner

Hien Tran

Art Unit

1764

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☐ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) 19-39 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1-18, 40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) 1-40 are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4,6 6) ☐ Other:

Art Unit: 1764

## DETAILED ACTION

### *Election/Restrictions*

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-18, drawn to an article, classified in class 422, subclass 177.
  - II. Claims 19-39, drawn to a method for removing NO<sub>x</sub> and SO<sub>x</sub> contaminants from a gaseous stream, classified in class 423, subclass 210+ .
  - III. Claim 40, drawn to a method of forming a catalyst composite, classified in class 502, subclass 439.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions II and III are related as process of making and process of using the product. The use as claimed cannot be practiced with a materially different product. Since the product of Group I is not allowable, restriction is proper between said method of making and method of using. The product claims in Group I will be examined along with the elected invention (MPEP § 806.05(i)).
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, recognized divergent subject matter and the search required for Group II is not required for Group III, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Mr. Richard A. Negin on 06/17/03 a provisional election was made with traverse to prosecute the invention of Groups I and III, claims 1-18 and 40. Affirmation of this election must be made by applicant in replying to this Office action.

Art Unit: 1764

Claims 19-39 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

#### ***Drawings***

6. The drawings have not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the drawings to comply with CFR 1.84(p)(5), e.g. they should include the reference sign(s) mentioned in the specification and vice versa.

#### ***Specification***

7. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

#### ***Claim Rejections - 35 USC § 112***

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claim 18 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Art Unit: 1764

In claim 18, lines 1-2 "the upstream substrate" and "the downstream substrate" have no clear antecedent basis.

***Claim Rejections - 35 USC § 102***

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1-18, and 40 are rejected under 35 U.S.C. 102(b) as being anticipated by Strehlau et al (CA 2,267,010).

With respect to claims 1-3, 8-16, 18 and 40, Strehlau et al discloses an apparatus and a method of making the apparatus, comprising:

a lean burn engine 2 having an exhaust outlet;

an upstream section 5 having a close coupled catalyst composite in communication with the exhaust outlet, the upstream close coupled catalyst composite comprising: a first support; a first platinum group component; and a SO<sub>x</sub> sorbent component selected from the group consisting of oxides and mixed oxides of barium, lanthanum, magnesium, strontium, etc. (page 21, lines 1-32; page 22, line 16-34; page 23, line 9 to page 24, line 5); and

a downstream section 6 comprising: a second support; a second platinum group component; and a NO<sub>x</sub> sorbent component selected from the group consisting of compounds of lithium, sodium, potassium, cesium, calcium, strontium, barium, lanthanum, etc. (page 20, lines 9-15; page 23, lines 9-32);

Art Unit: 1764

wherein the upstream section has substantially no components adversely affecting three-way conversion under operating conditions; the first and second supports may be ceramic (cordierite) or metal honeycomb substrates (page 1; page 11, line 33 to page 12, line 11; page 20, line 9 to page 21, line 32; page 22, line 16-34; page 23, line 9 to page 24, line 5; page 24, lines 13-16; page 25, lines 18-20).

With respect to claims 4-7, Strehlau et al discloses that the first and second platinum group metal components are platinum, palladium, rhodium, ruthenium, iridium, osmium (page 20, lines 12-15; page 22, lines 18-21; page 23, lines 25-26).

With respect to claims 17, Strehlau et al discloses that the upstream and/or downstream section further comprises a zirconium component (page 23, lines 10-18).

Instant claims 1-18 and 40 structurally read on the apparatus of Strehlau et al.

### ***Claim Rejections - 35 USC § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Art Unit: 1764

14. The art area applicable to the instant invention is that of catalytic converter.

One of ordinary skill in this art is considered to have at least a B.S. degree, with additional education in the field and at least 5 years practical experience working in the art; is aware of the state of the art as shown by the references of record, to include those cited by applicants and the examiner (*ESSO Research & Engineering V Kahn & Co*, 183 USPQ 582 1974) and who is presumed to know something about the art apart from what references alone teach (*In re Bode*, 193 USPQ 12, (16) CCPA 1977); and who is motivated by economics to depart from the prior art to reduce costs consistent with the desired product characteristics. *In re Clinton* 188 USPQ 365, 367 (CCPA 1976) and *In re Thompson* 192 USPQ 275, 277 (CCPA 1976).

15. Claims 1-18 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Strehlau et al (CA 2,267,010) in view of EP 625,633.

The same comments with respect to Strehlau et al apply.

Strehlau et al is silent as to the specific support for the storage catalyst 6.

However, Strehlau et al further discloses the conventionality of providing a specific support of catalyst and SOx sorbent (page 23, lines 9-18).

Furthermore, EP 625,633 discloses the conventionality of providing a NOx sorbent with the specific support as claimed.

It would have been obvious to one having ordinary skill in the art to use the conventional support as disclosed in Strehlau et al or EP 625,633 for supporting the NOx sorbent in the apparatus and method of Strehlau et al, if not inherent therein, on the basis of its suitability for

Art Unit: 1764

the intended use as a matter of obvious design choice, as use of such is conventional in the art and no cause for patentability here as evidenced by Strehlau et al and EP 625,633.

***Conclusion***

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hien Tran whose telephone number is 308-4253. The examiner can normally be reached on Tuesday-Friday from 7:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (703) 308-6824. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-0661.

HT  
June 20, 2003

*Hien Tran*  
**Hien Tran**  
**Primary Examiner**  
**Art Unit 1764**